16. *Clinical Means of Recognizing Mercury in the Excretions.*—M. MAYENCON and Dr. BERGERET, in an interesting paper on this subject in Robin's *Journal d'Anotomie*, No. 1, 1873, give the following as the conclusions at which they have arrived: 1. That mercury and its salts are absorbed by the skin as well as by the stomach. 2. That of the mercury absorbed a part, and that the major part, is immediately eliminated, whilst the smaller part impregnated the tissues, from which it is only insensibly eliminated. Even this part, however, is rather quickly eliminated if the use of the medicine has not extended over any great length of time. 3. Elimination seems to be effected by all the excrementitious fluids, but chiefly by the urine and the intestinal juices. 4. Iodine has a marked effect in clearing away mercury from the tissues. 5. Mercury and mercurial preparations discharged by the humours, and especially by the urine, are readily discoverable by the action of a voltaic element—iron and platinum. The mercury forms a metallic coating on the platinum, and should then be converted into the bichloride, and finally into red biniodide with a solution of iodide of potassium.—*Lancet*, April 5, 1873.

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

17. *Infantile Enteralgia.*—Dr. JOHN BOYD, in an interesting paper (*Edin. Med. Journal*, Feb. 1873) on an affection which he terms "infantile enteralgia," remarks: "In male children especially, from two weeks to four or six months, of a lively mobile temperament, we very frequently observe them subject to attacks of abdominal pain, which come on suddenly, generally at night, commencing at a little after twelve, and continuing with slight intermissions to four or five in the morning. The little sufferer draws up its knees and tosses about in the nurse's arms; the cry varying from an agonized scream to a plaintive wail, with intervals of sobs and long-drawn breaths; but neither the pulse nor the respiration is accelerated, nor is there usually any abnormal elevation of temperature. The natural language of the malady denotes unmistakably that the bowels are the seat of the pain, though the tenderness on pressure does not seem excessive. After a time the local uneasiness appears to have produced a quasi-hysterical action on the nervous system. If the infant be old enough to be attracted by any glittering object, or a series of moderately loud noises, he may forget his woes for a time, and all at once recollect them and resume his ululations as vehemently as before; bearing on his countenance that expression of conscious ill-usage which is so generally seen in those afflicted beings of maturer age and opposite sex, of whom it has been quaintly remarked that they are so very ill because there is so very little really the matter with them. After disturbing the whole household for the best part of the night and exhausting all the curative efforts of the establishment, the young gentleman falls quietly asleep, and seems so well and fresh next day that the history of the direful nocturnal events sounds like a baseless romance when related even to sympathetic auditors. Yet such experiences constitute one of the most painful trials which the youthful primipara is called upon to undergo, although Mater-familias of fifteen or twenty years' standing sustains them in general with philosophic equanimity.

"The enteralgia referred to does not commonly depend on mere fecal accumulation. In thriving children who are not as yet subjected to the pangs of teething, the alvine evacuations are comparatively scanty so long as the maternal lacteal secretion is the sole or preponderating source of nutrition. In such cases I have invariably noticed, that so long as the abdominal suffering lasts, the urination is suspended, that a true ischuria renalis exists for the time being; and that whenever micturition occurs the crying and distress cease, presenting exactly the same termination as that of the passio hysterica—the copious flow of a large quantity of clear limpid fluid. Acting on this indication, I have for many years past been in the habit, whenever such attacks were brought under my care, of prescribing from eight to ten minims of spiritus etheris nitrosi in a drachm of water, to children of the age above mentioned. Generally after the administration of this draught there occurs a discharge of flatus from the superior or inferior orifice of the alimentary canal—the ether acting as a diffusible stimulant and carminative; but without exception the passage of urine in large quantity takes place within a few minutes after its imbibition, the cries cease, and the small patient sinks into a refreshing slumber. Whatever view may be taken as to the causation of the malady in question—whether it may depend on a non-secretion depending on a temporary congestion of the glomeruli of the kidney or a partial paralysis of the more elaborated and complex urinary passages of the male, or merely from the presence of flatus in the colon mechanically suspending the renal function,—the fact is well ascertained that the phenomena above depicted are extremely frequent in male infants of all classes, and every variety of social and hygienic surroundings; also, that in some instances very serious mischiefs have been the consequence of such nocturnal pervagitus."

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18. *Hemorrhage of the Pons Varolii with Saccharine Urine.*—M. Lionville relates (*Gaz. des Hôpitaux*, Feb. 8) a case of complete paralysis, with only slight modification of sensation. The patient was picked up in the street insensible. The objective symptoms were those of hemorrhage in the pons Varolii. The urine was drawn off, and found full of albumen and sugar. There was no indication of Bright's disease. The presumption was, in accordance with Bernard's celebrated experiment, that the posterior wall of the fourth ventricle was compressed. Speedy death occurred. The necropsy showed that the hemorrhage had invaded a large part of the pons, and affected the upper part (that above the auditory nerves) of the wall of the fourth ventricle.—*London Med. Record*, April 2, 1873.

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19. *Disseminated Suppuration of the Kidney secondary to certain conditions of Urinary Disturbance.*—Dr. W. H. Dickinson, in a paper which he recently read before the Royal Medical and Chirurgical Society of London (*Lancet*, March 8, 1873), described the peculiar suppurative condition which is sometimes spoken of as the "surgical kidney," and is produced, as he shows, by the contact of unhealthy urine. Of all renal disorders, next to those described by Bright, it is the most destructive to life. It may almost be said to form the natural termination of stricture of the urethra, and is the especial danger which attends the use of the catheter and lithotrite.

The renal change which is always associated with signs of pelvic and vesical inflammation, and often with alterations of the gland dependent on wasting pressure and chronic vascular disturbance, essentially consists of a peculiar turgidity and friability of the renal structure, with the formation of small scattered abscesses, or soft yellow deposits antecedent to abscesses, throughout its structure. With these are usually seen conspicuous white lines in the cones, which are morbidly occupied straight tubes.

With this condition the microscope shows more or less dilatation of the straight tubes, distension of, or coagulation within, the bloodvessels associated with them, and disseminated intertubular suppuration, the distribution of which is regulated by the course of the veins. (The microscopic appearances were illustrated by drawings which show the dilatation of the straight tubes; the irregular repletion of, or coagulation within, the vessels of the cones and the larger veins of the cortex; and the origination of abscesses around the affected vessels and throughout limited tracts of the intertubular tissues. The swelling of the intertubular tissue where thus infiltrated by the new cellular formation was strikingly depicted in contrast with the slender network presented by the same structure in a part of the gland exempt from the change.)

Taking the structural changes in their mutual relation, the usual dilatation of the tubular exits, the morbid occupation of the veins, and the general absence of tubal inflammation, the nature of the process is clear. The disorder has its origin in the regurgitation of urine charged with morbific products.

This occupies and generally distends the straight ducts, and thence enters the neighbouring bloodvessels, and charges them with an infection resembling in its results that of pyæmia. This is distributed by the veins to the rest of the gland, sowing abscesses in their course, and ultimately causing constitutional symptoms analogous to those of pyæmia when otherwise derived.

The urine being obviously either the source or the vehicle of the morbific matter, it remains to inquire whence and in what circumstances it becomes thus contaminated. To help in answering these questions the author has collected the particulars of 69 cases from the post-mortem books of St. George's Hospital. The disorder was traced to mechanical obstacles to the escape of urine (stricture or enlarged prostate) in 31 cases; to paralysis of the bladder in 17; to stone in the bladder or operation for its removal in 15; to cystitis from other causes in 5; and in 1 to a renal calculus complicated with enlargement of the prostate. Looking at the urine as directly connected with the origin of the disease, it appears that three conditions usually concur—retention, ammoniacal decomposition, and admixture with the products of mucous inflammation. Of these, ammoniacal decomposition appears to be essential, or at least to be constantly present. The urine is also generally fetid, and more or less mixed with vesical products, pus, mucus, and blood. The ammoniacal change, although possibly arising independently of mucous inflammation, produces it so constantly that the origin of the disease is always thus complicated. The clinical antecedents to this condition are fundamentally of two kinds—those which begin with retention, and those which begin with cystitis; both in the end producing an ammoniacal and putrescent state of urine. Mechanical obstacles and loss of expulsive power, belonging to the first and larger class, occasion the retention and subsequent decomposition of urine, and its consequent admixture with the products of mucous inflammation. Stone and other vesical irritants, belonging to the second class, begin by causing morbid vesical discharges, which render the urine prone to decomposition, and ultimately induce in it a putrescent condition, not altogether dissimilar to that which springs from retention. The rarity of the renal disease as a consequence of stone in the kidneys is probably to be explained by the less putrefactive tendency of the discharges from the pelvic membrane, or of the urine in that cavity.

In cases otherwise so tending, catheterization, lithotrity, or some such instrumental proceeding, seems sometimes to act as the immediate instigator of the morbid process, as is witnessed by the common phrase which stigmatizes the disease as the "surgical kidney." The disorder, however, may arise independently of any surgical intervention, and would perhaps be better distinguished by the term *uriseptic*, which would declare its general clinical relations more comprehensively.

Having regard to recent researches which have associated the lower kinds of organic life with pyæmia, it is worth noting that the condition of urine which causes the disease now in question is one in which vibriones and bacteria abound. From this, however, no inference as to the nature of the virus can be safely drawn, except that it is associated with decomposition.

Passing to the symptoms of the disease, they have a general resemblance to those of pyæmia, being those of blood-poisoning rather than of renal inflammation. Unlike what happens with pyæmia, organs other than the kidney appear seldom to share in the suppurative process. The complaint usually ends fatally within three weeks of the first symptom, though there is evidence that recovery sometimes occurs. Perirenal suppuration is an occasional result.

In treatment our efforts must be directed chiefly to prevention, to which end, beyond cautious surgery, measures of two kinds suggest themselves. First, the preservation or restoration of the natural acidity of the urine, a matter of most difficulty where it is most needed; secondly, as a suggestion as yet unwarranted by experience, the introduction of antiseptics by injection into the bladder.

To sum up: the form of renal suppuration which may be termed uriseptic has its origin in ammoniacal and putrid urine, poison from which is conveyed by the veins into the substance of the kidney, and thence infects the system, causing symptoms in some respects resembling those of pyæmia. As this form of disease is little obedient to curative medicine, though not necessarily fatal, our efforts must be directed towards the correction of the state of urine from which it springs.

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20. *The Nature and Treatment of the Constitutional Forms of Eczema.*—Dr. E. D. Mapother, in a paper read before the Surgical Society of Ireland, observed that if the interest attaching to a disease be proportional to its frequency, eczema is most worthy of attention, for one-third of skin diseases are forms of this malady.

The causes and treatment of those forms due to sources of local irritation are thoroughly understood; for example, those due to the action of alkalies in washerwomen, sugar mites in grocers, the flow of tears from strumous eyes, the gravitation of the blood in varicose veins, are cured by the removal of the exciting cause and some emollient application, of which bran stupes and bran poultices are the best.

When eczema, on the contrary, affects large surfaces of the body without any local irritation, is symmetrical, apt to relapse, and (as is frequently the case) traceable in several members of the same family, some constitutional cause evidently exists, and should be sought for if we wish to treat the disease scientifically. The French call this cause "the dartrous diathesis," *dartre* being a popular term synonymous with "heat in the blood" in our vernacular; they confess ignorance of its nature, and only recognize it by aptness for relapse in eczema and lichen, and psoriasis as well. Dr. Mapother has long been inclined to hold with Golding Bird that excess of uric acid in the blood is this constitutional cause. Dr. Bird says: "I have been two or three times consulted in the cases of patients lying bed-ridden from rheumatic gout, in whom one or both legs were covered with an eczematous eruption, and the parts on which the exudation from the surface had dried had been actually frosted with microscopic crystals of urate of soda."

The following facts seem to him to prove that the gout poison is the cause of eczema:—

1. Many reliable observers have obtained uric acid and urates from the exudation of eczema, and their increase in the urine in the chronic stage of each disease is undoubted.

2. There is a great increase of fibrin in the blood, and it exudes and spontaneously coagulates on the raw surface.

3. Both diseases are characterized by great tendency to œdema and desquamation, which latter, of course, is universal in eczema, and occurs in three-fourths of the cases of gout when localized.

4. Gout can be shown to be hereditary in about three-fifths of the cases, and such predisposition can be shown in about an equal proportion of cases of general eczema. The greater proneness of the male sex is observable in both diseases.

5. Every one must have remarked the frequent consequence of symptoms of gout or of rheumatic gout and eczema. The Chelsea pensioners and the poorer agricultural people of this country exhibit this concurrence on the largest scale. I have seen very few cases of general eczema which had not been preceded or accompanied by what is so well known as acid or gouty dyspepsia.

6. It is an aphorism of Hippocrates that gouty attacks are most frequent in spring and autumn, and the same may be undoubtedly said of eczema.

7. The parts most distant from the circulatory force of the heart and least vascular—for example, the extremities and ears—are the most frequent seats of each disease, as the urates are most easily deposited.

8. And lastly, the treatment proven to be useful in gout is usually successful in eczema.

Lithia, Dr. Mapother has found of the greatest use, as would be anticipated from its extraordinary powers of combining and dissolving with urate of soda and uric acid. It never fails to act as a diuretic, and the derivative influence from the skin to the more extensive surface of the kidney can be easily understood.

Dr. Mapother usually combines colchicum with lithia.

It would appear that colchicum has no power of increasing the excretion of the solids of urine, but it is now generally believed to check the formation of urea and uric acid, a fact anticipated by the sagacity of Dr. Graves, whose physiological deductions were so remarkable.

In inveterate cases of eczema arsenic may be necessary, and that metalloid is of great repute in chronic gouty and rheumatic affections.

Lastly, sulphur internally and externally, especially when used in the waters of Harrogate, Leuk in Switzerland, and Lisdunvarna, nearer home, is of equal efficacy in gouty and eczematous affections.

A few words about external treatment. Carbolic acid diluted with seven parts of lard keeps the skin pliable, prevents suppuration and fetor, and has probably some astringent power. In cases of universal eczema, which are rare, starch baths, or, still better, bran baths, are called for, to check the excessive cutaneous transpiration.

Dr. Mapother strives to show that constitutional eczema depends on the gouty diathesis, and should be treated according to the well-known therapeutic indications observed in that condition.—*The Practitioner*, May, 1873, from *Medical Press and Circular*, Feb. 19, 1873.

21. *Alterations of the Nervous System of the Great Sympathetic in Cases of Constitutional Syphilis.*—Dr. PETROW on examining portions of the plexus of the great sympathetic which he had taken (ten to twenty-four hours after death) from the bodies of individuals affected with acquired constitutional syphilis, has stated two sorts of pathological changes: 1. Modifications of the protoplasma of nervous cells which become loaded with brilliant pigmentary corpuscles, increasing with the age of the disease, and often accompanied by colloid transformation of the cells; the cells of the endothelium surrounding the nervous cells frequently undergo the same gelatiniform transformation, and cannot then be distinguished from the nervous cells. These changes can exist without the interstitial connective tissue being impaired. 2. Modifications of the interstitial connective tissue with hyperplasia of the fibres, constituting large irregular fasciculi, which push aside and compress the nervous cells and fibres. The cells are then atrophied, irregular, and dotted with pigment, whilst the fibres are flattened, and their myelin shows slight granulations.—*Lancet*, May 10, from *Virchow's Archiv*, Bd. 57, heft 1, 1873.

22. *Acute Bronchocele.*—LUDWIG describes (*Archiv der Heilkuned*, vol. xiv., No. 6) the case of a gentleman, who, after suffering from violent paroxysms of cough for some days, was suddenly seized with a swelling on the front of the neck, which impeded respiration. There was found to be an elastic swelling extending downwards from four centimetres below the middle of the thyroid cartilage nearly to the sternum, and to the sterno-mastoid muscle on each side. In the course of a few hours, it increased to the size of a child's head; the dyspnœa became more intense, and deglutition was difficult. There was no pulsation in the tumour. Soon, however, it began to diminish; and the next day it had entirely disappeared. Ludwig regards the case as one of acute hyperæmia of the thyroid body, but cannot assign a cause.—*Brit. Med. Journal*, April 5, 1873, from *Berliner Klin. Wochenschr.*, March 3.

23. *Histology of the Blood of the Insane.*—Dr. HENRY SUTHERLAND, in a paper read before the Royal Med. and Chir. Soc., April 22, 1873, presented the results of the microscopical examination of the blood of 143 lunatics. The conclusions he draws from the examination were as follows: That in the insane generally a leucocythæmic condition frequently exists. That any great increase in the number of white corpuscles at the expense of the red, and an absence of rouleaux from the blood of the insane, are conditions which generally indicate a very low degree of vitality. That in general paralysis, epileptic insanity, and masturbating insanity, the blood is more deteriorated, and the vitality is more lowered, in the male than in the female. That in mania, melancholia, and dementia, the blood is more deteriorated and the vitality is more lowered in the female than in the male.

24. *Treatment of Basedow's Disease.*—The three essential features of Basedow's disease are palpitation and frequent action of the heart, swelling of the thyroid gland, and exophthalmos. Its relations to chlorosis are obvious, as its occurrence in females chiefly, and its frequent association with irregularities of the menstrual function, show. Nevertheless it occurs in men, and even in children. Drs. Eulenburg and Guttman, in speaking of the mode of treatment to be adopted, remarked that whilst formerly tonics were very generally employed with the object of improving the blood, as well as remedies that lowered the action of the heart, notwithstanding that experience demonstrated how little benefit was to be obtained by these means, in recent times the cure of the disease has been attempted by applying continuous electrical currents to the sympathetic in the neck. Dusch, it appears, was the first who adopted this means in a case which had long been otherwise treated without effect, and found that the application of from 10 to 20 elements reduced the pulse from 130 to 70, and even to 64 in the minute, the exophthalmos at the same time undergoing considerable diminution. MM. Guttman and Eulenburg tried the same means in 1867, and found that in a woman suffering from the disease, and having a pulse frequency of 108 to 130, with unusual tension of the carotids, galvanization of the cervical sympathetic with a very weak ascending current of only six or eight elements, a gradual fall of the pulse-frequency took place from 124 to 84, and even to 70, with coincident diminished tension in the carotid and radial arteries. This plan of treatment, however, was not continued long enough to cause much diminution in the size of the tumour of the thyroid or of the exophthalmos. Since then they have applied the current in four other cases, and in all with the effect of ameliorating the cardiac symptoms, but in none long enough to cause material improvement of the other symptoms. Chvostek has made numerous experiments on galvanization of the sympathetic in these cases, and in no less than thirteen of them has nearly effected a complete cure. In his hands the influence on the gland was well marked, whilst it was less distinct on the activity of the heart. Moritz Meyer also reports four cases where the thyroidal tumour was by the same means almost entirely abolished. (*Die Pathologie des Sympathicus;* Eulenburg and Guttman, 1873.) *The Practitioner*, March, 1873.

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25. *Phosphorus in Certain Forms of Disease of the Nervous System.*—Dr. Dickinson has recently been experimenting clinically with phosphorus in cases of affections of the nervous system characterized by deficiency of nervous energy, and has obtained decided evidence of the value of this remedy (see *The Practitioner* for April, 1873). He recommends a method by which phosphorus can be given in a form at once active and inoffensive, namely, dissolved in oil or lard, and inclosed in a gelatine capsule; the dose is about $\frac{1}{30}$ of a grain, and it may be taken two or three times a day, always after food.

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26. *Ergot of Rye in Hæmoptysis of Phthisis.*—Dr. F. E. Anstie has published (*The Practitioner*, Nos. for Feb., Apr., and May, 1873) a series of articles with cases illustrative of the efficacy of ergot in the hæmoptysis of phthisis. He thinks that he has now established the facts "(*a*) of the direct action of ergot in the cases which I have recorded; (*b*) of its superiority in several of these cases to other styptics that had been tried; (*c*) the probability, from physiological analogies, that ergot would act more universally as a checker of hæmoptysis than the routine remedies with which we are familiar; (*d*) also that it is perfectly safe for the purpose in view, and in this respect is superior to digitalis, which otherwise resembles it a good deal."

"One of the best proofs," he says, "of the reality of a supposed action of any drug is afforded when the effects, which were comparatively slight or dubious after the administration of the rougher preparations, become more marked and apparent in proportion as fewer and more concentrated preparations come to be employed in practice. Now this is precisely the history of ergot as a remedy for hemorrhage. Used at first in the form of infusion or tincture, it was only moderately efficacious; and indeed, so late as 1870, Nothnagel[1] expressly states that which I have been endeavouring to show can no longer be considered true, viz., that ergot is not superior to acetate of lead, or sesquichloride of iron in hæmoptysis. But the liquid extract, given by the stomach, has given even better and more certain results, not only in my hands but in those of several others. And the hypodermic injection of Bonjean's ergotin (which I have used for other purposes, but not for hæmoptysis) has given still more excellent promise, more especially in the hands of Drasche, of Jamieson, and of Dr. Currie Ritchie of Manchester; the latter gentleman published an excellent paper on the subject in the *Practitioner* for December, 1871.

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[1] Arzneimittellehre. Berlin, Hirschwald.

"Meantime there have sprung up other collateral illustrations of the effectiveness of ergot in producing contraction of the arterioles and moderating the heart's action: of which the most remarkable is Langenbeck's discovery of the therapeutic use of ergotine injections in aneurism. It is true that this latter subject is as yet not at all completely developed; but enough has been proved to strengthen materially the general mass of evidence in favour of the belief that ergot acts precisely in the manner in which we should desire a pulmonary hæmostatic to act. I of course do not say that we shall not possibly discover a yet more useful remedy for hæmoptysis, but at present we probably possess none equal to it. Over and above the important resource which ergot seems to afford when hemorrhage is actually dangerous in amount, and when such remedies as gallic acid, acetate of lead, or muriate of iron have failed, I think that ergot is likely to be the most appropriate of all hæmostatics for the hemorrhage of early phthisis, where it may be hoped that the lung has as yet undergone very little structural change. The prompt suppression of all oozing into the air-cells which, in view of the danger of phthisis *ab hæmoptoe*, it is so important to effect, can probably be in no way so effectually accomplished as by the employment of ergot.

"Nor do I prefer the gastric administration, although in the cases recorded I employed it. For getting the best results I can scarcely doubt that the hypodermic injection of ergotine is a decidedly superior method. But I was personally anxious to see whether the remedy would prove practically effective when given in a form which is much less troublesome, and consequently more adapted to every-day practice, than the hypodermic injection would be. I hope I have shown that it is effective in a very encouraging degree, and that the profession will soon come to recognize the preferability of a direct recourse to its use in hæmoptysis, instead of the routine employment of a series of astringent remedies which are considerably less uniform in their action."

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27. *Treatment of Elephantiasis by Compression.*—In the *Anfiteatro Anatomico Español* of Feb. 28, is described a case of elephantiasis Arabum occurring in a young man aged twenty, who came under the care of Dr. VELASCO, at Zaranz in Guipuscoa. The limb was greatly enlarged, the circumference at the centre of the thigh being about thirty-four inches, and at the calf of the leg twenty-four inches. The skin was rough and indurated, but otherwise not much changed in appearance. The only treatment adopted was the application of compression by means of a strong bandage four inches wide, applied spirally from the toes to the groin, and over it a strong linen legging. Under this treatment the limb regained its normal dimensions in the course of a year. —*London Med. Record*, April 2, 1873.

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28. *Use of the Sulphites and Hyposulphites in Intermittent Fever.*—In an exhaustive treatise recently brought before the Royal Institute of Lombardy, Dr. G. FARALLI, after examining critically the results of all the therapeutical experiments that have been made until now with the sulphites, especially in intermittent fever, arrived at the following conclusions, which he considers to be definitive: 1. It is not shown that intermittent is of a zymotic character. 2. However, the sulphites in many cases cure intermittent fever, though their action is not so rapid and constant as that of quinia. 3. Their mode of action seems to depend on their reductive, rather than on their anti-fermentative, power. 4. The only result really due to them, and established by a number of accurate observations, is the greater rapidity with which they seem to combat

abdominal phenomena. 5. Their protracted use brings on a certain degree of anæmia, and thus favours the development of paludal cachexia. 6. Their prophylactic property, which had been imagined *a priori*, is not established by accurate observations, as is that of sulphate of quinia. 7. In the treatment of intermittent fever the sulphites are much less efficacious than cinchona and its preparations, and it is only when these have failed that recourse may be had to the sulphites. 8. Preparations of arsenic, which should seldom be used in miasmatic fever, are yet better than the sulphites for combating paludal cachexia. 9. Out of the three methods generally employed in the treatment of periodic fevers, the sulphites and hyposulphites, manifestly inferior to quinia, both as a prophylactic and a curative means, must be considered as even less efficacious than the preparations of arsenic.—*Lancet*, May 3, 1873.

29. *Propagation of Typhoid Fever by Milk.*—In the summer of 1872 an epidemic broke out in the village of Armley (in the borough of Leeds, England) which Dr. BALLARD, in an official report just published, proves, beyond reasonable doubt, was propagated through the medium of the milk supply. It will be remembered that a similar epidemic broke out at Islington, and which Dr. Ballard proved to be due to the same cause. (See No. of this Journal for Jan. 1871, p. 270.)

Dr. Ballard in his report of the epidemic at Armley (the *Lancet*, April 5, 1873), shows how remarkably the fever picked out the customers of the dairymen, who is believed to have contracted the fever in a neighbouring locality five or six weeks before the epidemic began; how the largest consumers were among the earliest and the smallest among the latest attacked; and from the different facts stated and line of argument indicated he comes to the conclusion that the outbreak was due to the distribution of milk from the particular dairy of the infected dairyman, which milk had in some way become contaminated with the poison of enteric fever. He then proceeds to show how this contamination may have occurred, and proves that a well in the dairyman's yard used for dairy and domestic purposes was liable to be contaminated by the contents of a privy and a dung-hole, into one of which, if not both, the discharges of the dairyman when ill would be thrown; and he further shows that the sudden outburst of fever occurred within a fortnight of the period when the well would most probably have become polluted in the foregoing manner, while the time of its cessation followed the closure of the well at an interval consistent with the theory of the polluted water (added doubtless to the milk) being the efficient agent in the propagation of the fever.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

30. *Development of Cancer of the Skin.*—Dr. WM. H. CARMALT, of New York, writes us, that the notice of his paper in *Virchow's Archiv* on this subject, copied in our preceding number, page 546, from the *London Medical Record*, does not fairly represent his views, and he has favoured us with a copy of his paper which we had not previously seen.

The aim of Dr. C. in his paper appears to be to show—

1st. That cancer frequently originates from the epithelium of the hair follicles.

2d. That it does not originate from the endothelium of lymph vessels as alleged by Köster.

3d. The wandering capability of cancer cells, which though suggested before, he claims to have been the first to describe from actual observation. He has seen in two cases in sections of a freshly cut into cancer of the breast, a throwing out and retraction of processes by the cancer cells, *although* there was not noticed any *absolute change* of place as is seen in white blood corpuscles.

In an instance of round-celled sarcoma of the axilla he observed a similar